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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/606,050	06/29/2000	Shigeo Honma	H-926	7679

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EXAMINER

WINTERS, MAREISHA N

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 04/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/606,050

Applicant(s)

HONMA ET AL.

Examiner

Mareisha N. Winters

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-12 are pending.
2. Claims 5-12 are withdrawn from consideration.

Election/Restrictions

3. Applicant's election without traverse of Group I, claims 1-4, in Paper No. 5, is acknowledged.
4. Claims 5-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 5.

Specification

5. The abstract of the disclosure is objected to because it includes improper language such as "said". Correction is required. See MPEP § 608.01(b).
6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The abstract of the disclosure is further objected to because of the following minor informality: in line 5 "networks" should be singular (network). Correction is required. See MPEP § 608.01(b).

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8. The disclosure is objected to because of the following informalities: on page 3, line 2 and throughout the specification “fiber” should be --*fibre*--. Appropriate correction is required.

Claim Objections

9. Claims 1 and 4 are objected to because of the following informalities: in line 5 “fiber channel” should be --*Fibre Channel*--.

10. Claim 2 is objected to because of the following informalities: in line 2, “computer system” should be plural --computer *systems*--. Appropriate correction is required.

11. Claim 4 is objected to because of the following informalities: in lines 3-4 there is a superfluous occurrence of the term “wherein”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3 (lines 1 and 3) and 4 (line 6), the phrase “said storage” renders the claims indefinite because the term is vague and ambiguous. In order to clarify the claim language should “said storage” read, -- said *storages*--?

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,460,113 to Schubert et al.

In considering claim 4, Schubert et al. discloses a computer system which has plural client computers (Fig. 2, "34"), plural various servers (Fig. 2, "38" and "40"), plural various storages which keep data (Fig. 2, "66" and "42"), a local area network (LAN) (Fig. 2, "32") which connects said computers and said servers (Fig. 2), a storage area network (SAN) which lies between said servers and said storages (Fig. 2, "35"),

wherein said SAN forms a switched circuit network which is capable of connecting any said servers and any said storages through fiber channel switches (FC switches) (Fig. 1, "15" and column 3, lines 11-13 and Fig. 2 "48"), and

wherein when data in said storages is backed up to a backup device in a non-disruptive manner, said storages have function of receiving instruction of a volume split from said server, function of assuming as if data in a primary volume were kept in a secondary volume at the time of said instruction, and function of backing up said data from said secondary volume to a back up device (column 4, lines 54-61 and column 5, lines 35-41).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schubert et al in view of U.S. Patent No. 6,389,432 to Pothapragada et al.

In considering claim 1, Schubert et al. discloses a computer system which has plural client computers (Fig. 2, "34"), plural various servers (Fig. 2, "38" and "40"), plural various storages which keep data (Fig. 2, "66" and "42"), a local area network (LAN) which connects said computers and said servers (Fig. 2, "32"), and a storage area network (SAN) which lies between said servers and said storages (Fig. 2, "35"),

wherein said SAN forms a switched circuit network, which is capable of connecting any, said servers and any said storages through Fibre Channel switches (FC switches) (Fig. 1, "15" and column 3, lines 11-13 and Fig. 2, "48"),

said computer system comprising a terminal having operation and management software which performs storage management comprising management of logical volumes in said plural storages (column 3, lines 20-24), data arrangement (column 4, lines 22-33), management of setting up said FC switches (column 4, lines 10-11), and a backup operation for data in said storages (Fig. 2, "44", column 4, lines 57-59).

However, Schubert et al. fails to teach that the storage management comprises error monitoring. Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Schubert et al., as evidenced by Pothapragada et al.

In an analogous art, Pothapragada et al discloses a computer system with storage area networks (SANs) based on Fibre Channel technology (column 4, lines 17-18) having operation

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and management software which performs storage management (Fig. 1, "100", "110", and "120") comprising error monitoring (column 4, lines 51-55 (fault tolerance)). Given the teaching of Pothapragada et al, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Schubert et al. by employing the feature of error monitoring, such as disclosed by Pothapragada et al, in order to ensure that the correct data is being read to and written from the storage device, thus preserving the overall integrity of the system.

In considering claim 2, Schubert et al. fails to disclose wherein said SAN is connected to SAN in other computer systems via a wide area network (WAN). Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Pothapragada et al. In an analogous art, Pothapragada et al discloses wherein said SAN is connected to SAN in other computer systems via a wide area network (WAN) (column 2, lines 39-42 and Fig. 1, "100", "110" and "120"). Given the teaching of Pothapragada et al, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Schubert et al. by employing this well known feature in order to backup data across the entire network in one central location.

In considering claim 3, Schubert et al. discloses wherein when data in a primary volume in said storages is backed up to a backup device in a non-disruptive manner, a secondary volume corresponding to said primary volume is created in said storages by an internal function, a copy is made from said primary volume to said secondary volume, and said copy is transferred to said backup device via said SAN without passing said LAN (column 4, lines 54-61 and column 5, lines 35-41).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,548,711 to Brant et al.

U.S. Patent No. 6,199,146 to Pence

U.S. Patent No. 6,397,308 to Ofek et al.

U.S. Patent No. 6,421,723 to Tawil

U.S. Patent No. 6,446,141 to Nolan et al.

U.S. Patent No. 6,526,419 to Burton et al.

U.S. Patent No. 6,502,162 to Blumenau et al.

U.S. Patent No. 6,535,518 to Hu et al.

European Patent Application EP 0 881 560 A2

European Patent Application EP 0 858 036 A2

International Application WO 99/34297

Phillips, Barry. "Have Storage Area Networks Come of Age?" Computer, vol. 31, issue 7, Jul. 1998. IEEE. ©1998. pp. 10-12.

19. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).


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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mareisha N. Winters whose telephone number is (703) 305-7838. The examiner can normally be reached on Monday-Friday, 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for official communications, (703) 746-7240 for non-official communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Mareisha N. Winters *now*
Patent Examiner
Art Unit 2153
April 4, 2003


GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100